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| DAVID M. O'BRIAN 5007 HARTWELL DR. HOUSTON, TX 77084 | | | EXAMINER PICKARD, ALISON K | |
| | | | ART UNIT 3673 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/761,041 | Applicant(s) HEATHCOTT ET AL. | |
| | Examiner Alison K. Pickard | Art Unit 3673 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-39 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 25-39 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. The substitute specification filed 7-27-06 has not been entered because it does not conform to 37 CFR 1.125(b) and (c) because: it raises questions of new matter. The description of structural features shown in the Figures (e.g. wall 18 is longer than wall 16) is fine. However, the description of benefits/advantages of such features (e.g. it can be stacked, page 4) is considered new matter. These functions/advantages were not part of the original specification.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 25, 29-32, 36-39 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims now require the dynamic seal to be a combination of an elastomer AND aramid fiber filled HNBR (or bronze/carbon filled PTFE, or plastic and PTFE/etc). However, the specification only appears to describe the dynamic seal to be made of either PTFE, carbon filled PTFE, bronze filled PTFE, or aramid fiber filled HNBR. It does not seem to describe one of these elements in combination with an elastomer or plastic.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 25, 29-32, 36-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding the above 112 first rejection, the claims are unclear. Is applicant trying to claim only element 20 as the dynamic seal or the leg and element 20? The claims have been examined as best understood.

6. Applicant is advised that should claim 26 be found allowable, claim 33 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

They appear to be duplicates because claim 26 already claims the dynamic seal to be on the inner diameter.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 26-28, 31, 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wheeler in view of Iverson.

Wheeler discloses a seal 40 (fig. 6) comprising a u-shaped body with an inner wall, outer wall, and seat. As seen in Figure 6, the outer wall has an extended length. The walls are parallel

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to the axis and the seat is perpendicular to the walls. The seal has an open, asymmetrical u-shaped channel 45. The outer diameter forms a static seal at the outer surface of the outer wall and seat. The inner diameter has a composite dynamic seal/wear surface of PTFE 44. The lip has a cloth and TEFLON film. The pores of cloth would be "filled" with the elastomer of the lip when bonded. Thus, the lip is considered a "filled composite dynamic seal." And the seal includes a first radially extending lip 42 on the inner diameter of the inner wall and a second radially extending lip on the outer diameter of the outer wall. Wheeler discloses an expander 28 in the channel. However, Wheeler does not disclose a plurality of ribs within the channel. Iverson teaches a seal with groove, seat, and legs. Iverson teaches using plural ribs within the channel instead of an elastic expander to accommodate a large range of uniform expansion and compression. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the seal of Wheeler with the ribs taught by Iverson to accommodate a large range of uniform expansion and compression.

9. Claims 25, 29 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wheeler in view of Iverson in view of Sakakibara (5,232,987).

Wheeler discloses a seal 40 (fig. 6) comprising a u-shaped body with an inner wall, outer wall, and seat. As seen in Figure 6, the outer wall has an extended length. The walls are parallel to the axis and the seat is perpendicular to the walls. The seal has an open, asymmetrical u-shaped channel 45. The outer diameter forms a static seal at the outer surface of the outer wall and seat. And the seal includes a first radially extending lip 42 on the inner diameter of the inner wall and a second radially extending lip on the outer diameter of the outer wall. Wheeler discloses an expander 28 in the channel. However, Wheeler does not disclose a plurality of ribs

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within the channel. Iverson teaches a seal with groove, seat, and legs. Iverson teaches using plural ribs within the channel instead of an elastic expander to accommodate a large range of uniform expansion and compression. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the seal of Wheeler with the ribs taught by Iverson to accommodate a large range of uniform expansion and compression.

Wheeler discloses the seal is made of elastomer, but does not specify what type. Sakakibara teaches making seals of a specific elastomer composition to provide excellent wear resistance and strength (see abstract). Sakakibara teaches the composition comprises HNBR filled with aramid fibers. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the seal from this composition to improve the seals wear resistance and strength. Also, such modification would create a composite dynamic lip in that the lip comprises elastomer, aramid fiber filled HNBR, and a PTFE film.

10. Claims 30, 32, 37, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wheeler in view of Iverson as applied to claims 26 and 30 above, and further in view of Schofield (5,163,692).

Schofield teaches a u-shaped packing ring having a composite dynamic leg. The leg comprises PTFE. Schofield teaches the PTFE can have fillers (see col. 7, lines 25-32) to provide low coefficient of friction. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to use a filled PTFE as the film to provide a low coefficient of friction.

Response to Arguments

11. Applicant's arguments filed 2-20-07 have been fully considered but they are not persuasive. The combination of references creates a "composite dynamic sealing lip." This phrasing does not limit the structure of the lip or of the insert. Regarding the teachings of Iverson, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison K. Pickard whose telephone number is 571-272-7062.

The examiner can normally be reached on M-F (10-7:30), with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tricia Engle can be reached on 571-272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Alison K. Pickard
Primary Examiner
Art Unit 3673

AP